SANDIA LAB NEWS

VOL. 20, NO. 9, MAY 3, 1968

SANDIA LABORATORIES ALBUQUERQUE, NEW MEXICO LIVERMORE, CALIFORNIA OPERATED BY SANDIA CORPORATION FOR THE U. S. ATOMIC ENERGY COMMISSION

Correlating High Altitude Density Data

Hawaii Rocket Series Set

Reflective balloons. Rockets releasing aluminum chaff or sodium clouds. These and other devices have been used by Sandia Laboratory during the past 10 years in a continuing research study of the upper atmosphere.

Data have been gathered to pinpoint such things as the direction of winds, the density of air at various elevations, and the temperatures in space.

A new series of tests to study high altitude density and pressures will be carried out in May from the AEC's Barking Sands launch area in the Hawaiian Islands. There will be a marked difference, however, in this test series over previous ones: for the first time, several different techniques—each with its own advantages and limitations—will be used to acquire the data under controlled conditions, and the results will be compared and evaluated. Depending upon weather conditions, four different kinds of measuring devices will be carried into the upper atmosphere by rockets within a two-hour period on May 16, and five different measuring devices will be sent aloft within a four-hour period on May 23.

Responsibility for the series will be shared by Re-entries Studies Division 9326, Atomic Particle Physics Division 5235. Radiation Phenomena Division 5233, and the Air Force's Cambridge Research Laboratories.

New Instruments

K. J. Touryan and D. J. Rigali (both 9326) will use two types of instruments for their studies: a 50° pitot-static probe and an electron beam combined with the pitot-static probe.

The probe, a new measuring device, will use four thermoconductivity gauges to measure the pressure. At launch, a fragile glass cover will keep pressure parts clean until the rocket reaches 50 km (or any other desired elevation). Measurements will start after the covering is shattered. The probe's functional range is 30-90 km.

The other measuring device is basically a 20kv electron beam. Since nitrogen molecules become excited and glow when struck by electrons from the beam, the more dense the air, the brighter the fluorescence. When the atmosphere has not been disturbed by the rockets, this beam can be measured from a distance of 15 cm outward.

"This is the only direct density measuring technique available to date," Mr. Touryan explains. "The instrument has been used successfully in wind tunnels, but has never been sent aloft on a rocket. Both NASA and the Air Force are interested in this feasibility test." The instrument will be activated at a height of 50 km and is expected to give continuous readings to 150 km.

The pitot-static probe will be flown alone on one Nike-Apache rocket, while the probe and electron beam will be packaged together in the nose cone of another Nike-Apache.

Mr. Touryan adds, "A possible extension would be adding special filters to measure temperature and composition of the atmosphere simultaneously with density."

Falling Spheres

"Passive" falling spheres (so called because they do not contain any instrumentation) will be used by L. B. Smith (5235) in his experiments. These polyethylene balloons with their metal-coated surfaces are folded and carried aloft in tubes inside the rocket until a timing device ejects them into space. At that time a vial of isopentane inside the sphere is punctured and the low pressure of the atmosphere causes the liquid to vaporize and fill the balloon to a diameter of 26 inches.

"The sphere will follow the rocket's trajectory for about 70 km until winds begin to move it about," Mr. Smith says. "Below 30 km, the outside pressure is as great as the inside presssure and the sphere will begin to collapse."

Plans call for each Nike-Cajun to include three of these spheres. Since the effects of drag on the spheres will be an indication of density, the devices will be tracked by radar from the NASA manned satellite tracking station at Kokee, Kauai, and the Navy's Pacific Missile Range facility at Barking Sands, Kauai. The spheres will be tracked by means of their reflective surface.

The sphere was developed by the University of Michigan under contract to the Pacific Missile Range for its re-entry studies. Sandia has used 20 of the devices since 1964 to obtain density measurements.

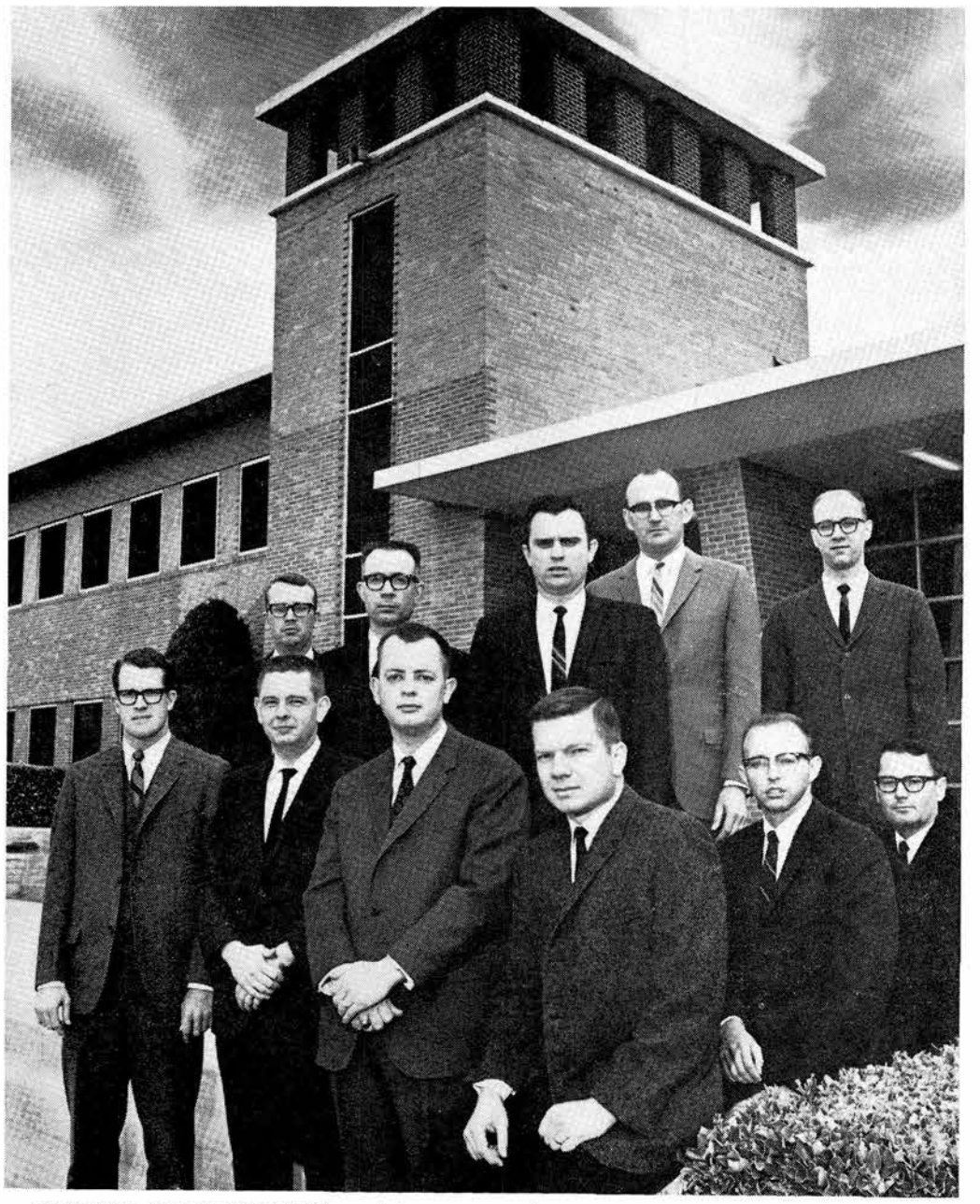
"Grey Zone" Studied

Another Sandia experiment will use four modified laboratory-type vacuum gauges for direct measurement of density between 100-250 km. This particular range of altitude was decided upon because it is a "grey zone"—above most rocket shots and below most satellites—and one in which not much data have been collected.

R. O. Woods (5235) explains that this experiment is unusual in that the large payload capacity of the nine-inch diameter Nike-Tomahawk makes it possible to fly a number of gauges in a single package. Three commercial-type cathode gauges have been redesigned to withstand flight environments and will be employed along with an existing type of hot filament gauge. Information will be telemetered to the ground. A comparison of the data obtained by the four density gauges should also permit calculation of temperatures.

Cambridge Research Laboratories will use "active" falling spheres containing accelerometers to sense changes in density. These spheres are able to send a ground-activated signal (based upon readings of the accelerometer), which is telemetered to the ground and recorded. Because they are instrumented, they can be used at higher altitudes—roughly 90-140 km. The

(Continued on Page Two)



DOCTORAL STUDY PROGRAM participants, named recently by President John Hornbeck, are (first row, from left) R. D. Andreas (5621), D. A. Dahlgren (5231), J. E. Gover (1316), T. S. Edrington (1425), J. M. Freedman (1548) and O. L. Burchett (1144). Standing in second row are D. G. Schueler (1433), G. J. Simmons (5590), B. W. Marshall (9311), G. W. Stone (9314) and J. J. Cashen (2452). Not shown are J. D. Moreno (9326), C. F. Dodge (8147) and S. G. Varnado (7222).

First Participants Selected for Sandia's New Doctoral Study Program

The first employees to participate in Sandia's new Doctoral Study Program (DSP) were named April 15 by President John A. Hornbeck. The DSP permits full-time study at an approved university for an initial period of 12 months with the possibility of additional 12-month extensions. Sandia will pay the cost of tuition and normal school fees, and the participant will receive a reduced salary.

The selected participants, sponsoring directorate, university, and field of study are as follows:

O. L. Burchett (1100), University of Oklahoma, materials dynamics; J. E. Gover (1300), UNM, nuclear energy; T. S. Edrington (1400), UNM, communications theory (EE); D. G. Schueler (1400), University of Nebraska, thin films (EE); J. M. Freedman (1500), Northwestern University, structural dynamics.

J. J. Cashen (5200), Stanford University, systems theory (EE); D. A. Dahlgren (5200), UNM, numerical analysis (mathematics); G. J. Simmons (5600), UNM, communications coding theory (mathematics); R. D. Andreas (5600), UNM, control systems (EE).

C. F. Dodge (8100), University of California-Davis, structural dynamics; G. W. Stone (9300), University of Notre Dame, reentry dynamics (aerospace engineering); B. W. Marshall (9300), Oklahoma State University, fluid dynamics (aerospace engineering); and S. G. Varnado (7200), University of Texas, underwater propagation (EE).

Under the provisions of the DSP, "persons eligible to be considered for this program must be MS-level employees of exceptional merit and ability. Their personal characteristics and past job performance must indicate promise of outstanding success at Sandia at the doctoral level." In addition, they "must have high academic averages for both their bachelor's and master's degrees."

Candidates were selected by the Education Committee on Feb. 1, 1968, and asked to develop a firm study plan with their university by April 1. The Education Committee then made its final recommendations to President Hornbeck.

G. A. Fowler (9000), chairman of the Education Committee, said, "It was evident from the first assessment of the candidates that all those recommended were of the highest caliber and met the standards set for consideration. A very detailed study of academic performance, job performance, director and faculty recommendations, proposed doctoral program as well as personal interviews with the candidates were required in order to make the final selections."

Each of the candidates submitted a plan for his doctoral program as part of the qualifications for selection. They will start their academic work the fall semester of 1968.

The DSP was proposed by the Education Committee after more than a year of intensive study.



NIKE-APACHE ROCKET will carry this instrument package during the forthcoming high altitude density test series in Hawaii. K. J. Touryan (9326) is showing J. P. Gallagher (9323) location of a new measuring device, an electron beam, which will be used in addition to a pitot-static probe.

Editorial Comment

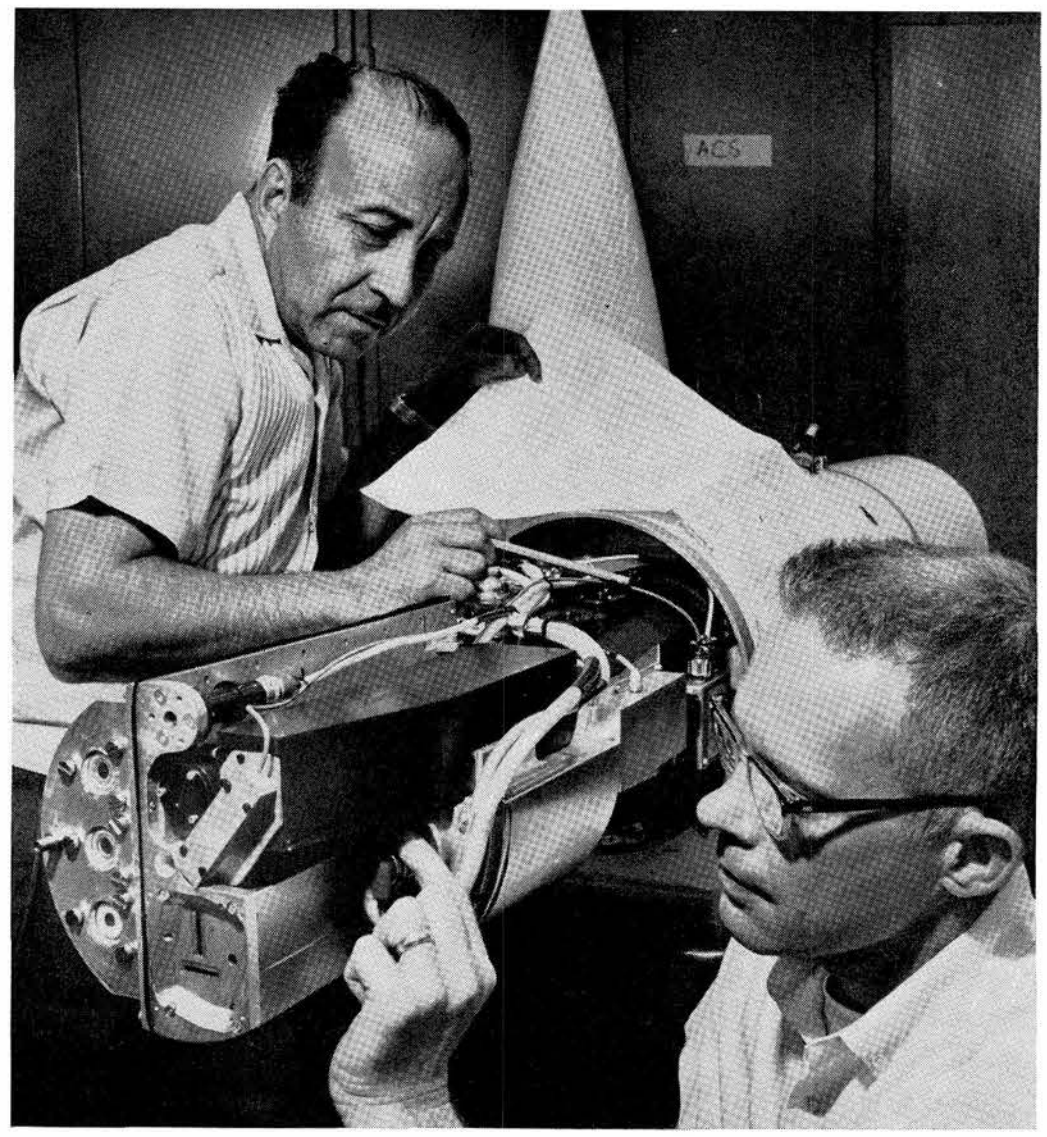
May 1 – Law Day – 1968

In 1961 Congress, by a joint resolution, designated the first day of May each year as Law Day, U.S.A. On Feb. 14, 1968, the President issued his annual proclamation calling upon the American people to recognize and support the national observance of Law Day on May 1, 1968. The following is an excerpt from that proclamation:

"The law we recognize and respect is not the mere exercise of power. It is not just a device to enforce the status quo. Law is a process of continuous growth that allows the creation of new rights for all men through a deliberate democratic process. It is a system that permits existing rights to be protected, injustices to be remedied, and disputes to be resolved, without recourse to self-defeating violence."

Never before in the history of our country has the need for law and order been greater. Reasonable men know that violence merely begets more violence. The causes of economic and social justice can only prevail if the laws of the land are respected and obeyed.

This then is the true meaning of the theme of Law Day 1968: Only a lawful society can build a better and lasting society.



INSTRUMENTATION BEING INSTALLED in a section of 12-inch-diameter Nike-Tomahawk by Adolfo Martinez (left) and D. R. Kuehl (both 9221) will be used to measure the density of molecular oxygen by observing the absorption of solar radiation.

Plans for Progress Program

New Post for J. R. Garcia

On May 1, J. Robert Garcia, manager of Personnel Department 3230, was transferred to newly created Department 3260, Equal Employment Opportunity Special Assignment Department, to work on Sandia's role in the Plans for Progress Program. Bob expects to spend about one year on this assignment.

In accordance with the Plans for Progress agreement signed between Sandia and President Johnson three years ago, Bob's appointment will strengthen Sandia's pledge for affirmative action to ensure equality in opportunity for all job applicants and those already employed.

In his new assignment, Bob will be working closely with other executives of the Bell system throughout the country to support this vital national effort.

Bob's first major task will be to help set up a Conference of Southwestern Region Employers to be held in Albuquerque June 26-28. The conference will be sponsored by the Community Relations Services of the Department of Justice, the Inter-Agency Committee for Mexican-American Affairs and the Plans for Progress organization. Representatives from the Bureau of Indian Affairs and various organizations interested in minority group problems will be invited to take part in this meeting.

The purpose of the conference is to give the representatives from the various industries an opportunity to outline the actions they are taking to ensure equal employment opportunity for all citizens. Representatives from minority groups will be able to relate what they themselves are doing to prepare their people to qualify for employment.

Although Bob's efforts will be concentrated in the Southwestern region of the U.S., primarily in New Mexico, he will be working directly with representatives of federal agencies and private industry throughout the nation.

Sandia Pre-Employment Tests Receive WE Approval Stamp

Western Electric testing certificates were recently awarded Sandia's two laboratories in recognition of "professional standards of administration and validation for all pre-employment tests."

R. M. Herrick, WE Personnel Director, in an accompanying letter notes that the certification requires use of locally valid tests, professional quality administration, proper physical conditions, business-like documentation of results and use of tests as only one tool in total selection procedure. He added, "Testing at Sandia Corporation is being well-managed."

J. R. Garcia, manager of Personnel Department 3230, pointed out that Western Electric is recognized nationally by EEO officials as a leader in the industrial field for its professional testing standards. "We welcome this certification and a critical look at our testing program by an outside organization," he said.



TEST COORDINATORS Nancy Aucoin for Sandia Laboratory and Evelyn Foote (center) for Livermore Laboratory receive congratulations from J. R. Garcia, Personnel Department manager, upon Western Electric validation of Sandia's pre-employment testing.

Continued from Page One

High Altitude Rocket Series

spheres are 39 inches in diameter and will be carried on Nike-Iroquois rockets.

Sun Scanner

On May 23, the test series will include an experiment to measure the density of molecular oxygen between 70-160 km by observing the absorption of solar radiation. The experiment was originally proposed by P. J. Brannon (on leave) and has been continued by J. M. Hoffman (5233). Three narrow band photometers and a scanning monochromator will be carried on a 12-inch-diameter Nike-Tomahawk. Information will be telemetered to the ground.

The rocket will contain an attitude control system to keep the monochromator pointed at the sun to within only ± one-eighth of a degree during the entire flight.

By measuring the absorption of solar radiation by oxygen molecules, one can determine the relationship between density and altitude. Although recovery of the unit is not essential to the test, attempts will be made to locate the instrument package to determine condition of the equipment.

All in all, the various devices will provide density information from heights of 30-250 km (with several of the systems overlapping). After each experimenter studies his data, he will give the results to the others for comparison.

Atmospheric Sampler

In addition to these nine rocket firings, there will also be the last of the Sandia development shots for an atmospheric sampler (LAB NEWS, Oct. 7, 1966), and two shots each for Lawrence Radiation Laboratory and Los Alamos Scientific Laboratory.

R. I. Ewing (5235) explains that the sampler is an eight-foot-diameter sheet of mylar, packaged in the nose cone of a spinning rocket. After deployment, the sheet flattens into a disk, sweeps up condensible particles in the atmosphere, then is reeled back into the nose cone and is sealed inside. The test is tentatively set for May 17. The sampler will be open between 100-300 km, and a movie camera on the rocket will record the "sail" at intervals during this period. The sampler was developed by Carrier Systems Division 9224.

Approximately 70 Sandia employees will participate in the launch activities. Sandia is responsible for instrumentation, telemetry, and rocket systems for all 14 launches. Test director at the site will be J. J. Miller (9222). R. R. Moore (9221) is in charge of the airborne instrumentation system preparations, and K. F. Crowder (9224) is directing carrier system preparations. The Pacific Missile Range facility at Barking Sands will provide radar to track the rockets, and aircraft and ships to recover some of the instruments from the water.

IEEE Technical Meeting May 7

The Albuquerque Section of the Institute of Electrical and Electronics Engineers will sponsor a technical meeting Tuesday, May 7, reviewing electronics research in Albuquerque. The meeting, with presentations by representatives of Sandia Laboratory, Kirtland AFB, University of New Mexico, Gulton Industries, Inc., and Dikewood Corporation, will start at 8:30 a.m. in Bldg. 815.

R. J. Chaffin (1423) will discuss "Generation of Microwave Power with Gunn, LSA and Impatt Devices." C. E. Land (5143) will discuss "Electro-Optic Ceramics —New Materials for Information Storage and Display."

For a complete program listing, contact Jerry Hood (1435), conference chairman, tel. 264-4300.

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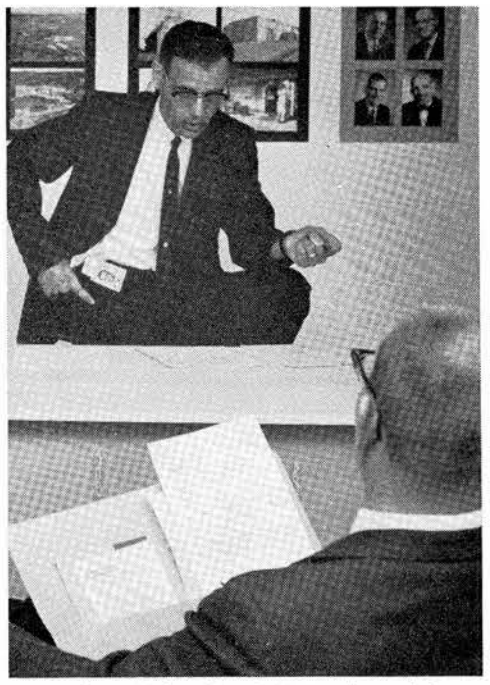
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LIVERMORE NEWS

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Paul VanDyke (8233-3) in photo lab.



Tom Dadian (8142) in welding lab.

Candid photos taken during Industrial Technology Briefing April 27 at Livermore Laboratory for high school and junior college teachers from Alameda and Contra Costa Counties.



Bill Schmedding (center, rear), 8223-2, in special machining shop.



Joe McManus (8233-2) in technical art briefing.

Weapon Data Indexing Committee Meets at Livermore Laboratory

Representatives from atomic weapons agencies throughout the country attended a meeting of the Joint Atomic Weapon Technical Information Group (JAWTIG) held at Livermore Laboratory April 16-18.

Host to the group was Elizabeth Bodie, librarian in Library Division 8232 and SCLL's official representative at the twice-yearly meetings. This meeting marked the second time the group met at Livermore Laboratory; the first time was in April 1963.

The group was organized in 1951 at the request of the AEC's Division of Military Application to maintain bibliographic control over the multitude of weapon data reports generated within the AEC-DOD complex.

Each member agency indexes its own weapon data reports and, in addition, those issued by its contractors. From cataloging input, the Division of Technical Information Extension at Oak Ridge, Tenn., prints and distributes catalog cards, and Sandia Livermore Laboratory prints and distributes computerized book catalogs.

Sandia's laboratories at Albuquerque and Livermore are two of the 11 member agencies contributing data. Calla Ann Crepin of Book and Report Cataloging Section 3421-2 is Albuquerque's official representative. Contributing member agencies with their official representatives also in attendance at the meeting were the Defense Support Agency Headquarters, Pat B. Steadman; Naval Ordnance Laboratory, Eva Liberman; Picatinny Arsenal, Henry Voos; Los Alamos Scientific Laboratory, Mary Ellen Ludemann; and the Division of Technical Information Extension, James M. Jacobs.

Other contributing member agencies include the Defense Atomic Support Agency Field Command, Kirtland Air Force Base Weapons Laboratory, Naval Ordnance Systems Command, and Naval Electronics Systems Command.

Administrative or policy-making members of JAWTIG represented at the meeting were the AEC/Division of Military Application, Ralph G. Shull; and the AEC/Nevada Operations Office, Robert R. Loux.

Chairman of the meeting was Walter Kee, Division of Technical Information, AEC/Washington.



CORPORATE AUTHORS FOR THE WEAPON DATA INDEX were discussed at a meeting of the Joint Atomic Weapon Technical Information Group (JAWTIG) held at SCLL April 16-18. Among the representatives from atomic weapon agencies who attended were (from left) Henry Voos, Picatinny Arsenal; James M. Jacobs, Division of Technical Information Extension at Oak Ridge; Calla Ann Crepin, Book and Report Cataloging Section 3421-2; and Elizabeth Bodie, Library Division 8232, host for the meeting.

B. S. Biggs Honored by U. of Akron As Member of WW II Research Group

B. S. Biggs (8000) was one of a group of honored guests of the University of Akron at ceremonies held April 19 officially dedicating a large new Science and Engineering Center.

Those honored had been the attendees at the first meeting on Dec. 28 and 29, 1942, of the Copolymer Research Group of the U. S. Government Synthetic Rubber Program. The group was organized early in World War II to do research aimed at the development and production of a suitable replacement for natural rubber.

Forty-one scientists, from various university and industrial laboratories, were called together by the Rubber Director's Office of the War Production Board for that first meeting. The Bell Laboratories' representatives at the meeting were W. O. Baker, A. R. Kemp, Mr. Biggs. R. R. Williams and C. S. Fuller, also of the Bell Laboratories, were on loan to the Government at that time and attended as representatives of the Rubber Director's office.

The Copolymer Research Group, augmented by numerous additions as the program progressed, met at frequent intervals throughout the early years of the war to report the results of the intensive research programs carried out by various teams. The priority given the Rubber Director's Office was second only to that of the Manhattan Project.

Through this research, and a parallel effort in production engineering, the United States by 1945 was producing general purpose synthetic rubber at a rate of 800,000 tons per year. The Allied armies which overran Europe rode on tires made of this synthetic material.

The celebration of the 25th anniversary of the Copolymer Research Group was made to coincide with the dedication of the new University of Akron Science and Engineering Center which houses, among other departments, the Institute for Polymer Research. Of the 41 scientists present at the first meeting of the group, 19 attended the reunion. Five of the others are deceased.

The principal address at the dedication was given by W. O. Baker, now vice president, Research, at the Bell Laboratories, who was further honored by being awarded the degree of Doctor of Science.

Another event of the day was the induction of Peter J. W. Debye into the International Rubber Science Hall of Fame. Prof. Debye died in 1966. He had been a member of the Copolymer Research Group, and his contribution to the program added new distinction to a name already famous in several other fields.

Sympathy

To Val Cowan (8212) for the death of her mother in Santa Clara, April 3.

To Anne Crow (8115) for the death of her husband in Castro Valley, April 21.

To Vic (8252) and Sharon Ham (8100) for the death of Vic's brother in Baldwin Park, Calif., April 9.

To Chuck Shinneman (8112) for the death of his father-in-law in Oakland, April 9.

To W. M. (Bert) Folks (8119) for the death of his wife in Livermore, April 28.

Weapon Physics Subject Of May 8 Colloquium

Dr. Roland Herbst, associate director for nuclear design at LRL, and Dr. Joseph Landauer, physicist in the nuclear design organization, will speak on "Weapon Physics" at the Livermore Laboratory Colloquium Wednesday, May 8.

After receiving his PhD in 1953 from St. Louis University, Dr. Herbst began work as a research associate at the Argonne National Laboratory. He joined the staff at LRL in 1954, rising to his present position in 1968.

In 1959 Dr. Herbst acted as scientific advisor in the negotiations of the treaty of nuclear weapons test suspension in Geneva, Switzerland. He returned in the same capacity to Geneva for the 1962 disarmament conference.

Dr. Herbst is a member of the Air Force Scientific Advisory Board Nuclear Panel, DD&E/DSB Ballistic Missile Defense Panel and Vulnerability Task Force and Operation Analysis, the Poseidon/Polaris Steering Task Group and the Samso Advisory Group.

A physicist at LRL since 1958, Dr. Landauer received his PhD in 1954 from the University of Chicago. From 1953-58, he worked with the U.S. Army Corps of Engineers in the Snow, Ice and Permafrost Research Establishment. He is a member of the Physics Society, Society of Rhedology and British Glaciology Society.

Attendance is by invitation only. Host for the Colloquium is James B. Wright (8158).

Congratulations

Mr. and Mrs. Ken Tschritter (8252) a daughter, Lynn Marie, April 9.

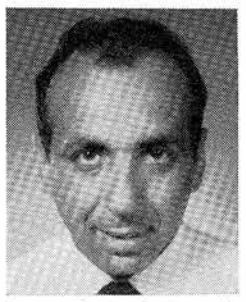
PURCHASING SAVINGS BONDS by payroll deduction is the most convenient way to accumulate permanent savings. Remember also that Savings Bonds provide a method whereby the government can borrow money at a reasonable rate of interest. And it is to our advantage for the government to borrow money at reasonable rates. It is one of the most effective ways to stop inflation.



Andrea Ramirez (8253)

Take a Memo, Please

Supervisory Appointments



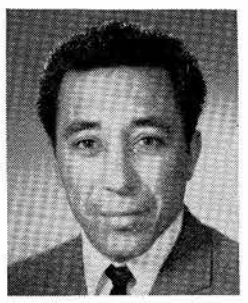
JOHN J. SARKIS to supervisor of Design Definition Section B 2212-2, effective May 1.

John joined Sandia as a draftsman in July 1961. One year later he was made senior product draftsman and in 1965 was promoted to product design draftsman.

Before coming to Albuquerque, he served with the U.S. Navy as machinist's mate from August 1954 to September 1957.

John was awarded an associate engineering degree in drafting and design technology from Pennsylvania State University in June 1961. He is currently studying mechanical engineering at the University of New Mexico.

He is a member of Tau Epsilon Chi, an honorary associate engineering fraternity.

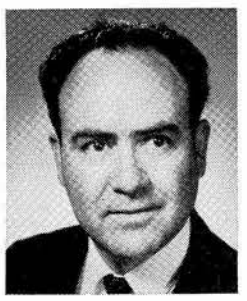


BONEY VIGIL to supervisor of Second Shift Operations Section 9411-2, effective May 1.

Boney joined Sandia as a messenger in the mail services group in March 1956 and six months later was made tab equipment operator. Since then he has been working with IBM and CDC computers in the computing organization. In October 1967 he was promoted to staff assistant.

Before coming to the Laboratory, Boney served with the U. S. Air Force from June 1951 to June 1955 as a radio operator.

He completed a two-year business course at Draughon's Business College in 1958. In addition, he completed several courses in Sandia's Out-of-Hours educational program.



BENNY M. GARCIA to supervisor of Stores Section 4613-2, effective April 16.

Benny joined Sandia as a wireman in a cable section in December 1950. In April 1951 he was granted a military leave of absence and served in the Army until April 1953, mainly in Korea. He then returned to the Laboratory as a storekeeper in the model shop warehouse. Later he served as a layout operator, catalog analyst and order analyst until he was promoted to administrative staff assistant about two years ago. Since then he has been preparing programming reports in Product Tester Gage and Spares Programming Section 2522-1.

Benny received his BA degree in business administration from the University of Albuquerque in June 1963.

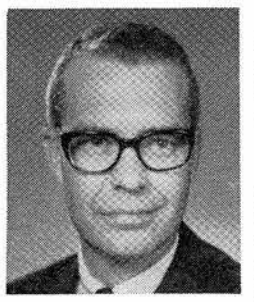


RICHARD E. BURKEN to supervisor of Records Control Section 4623-1, effective April 8.

Dick joined Sandia as a clerk in a documents group in December 1954. About eight months later he transferred to records control as a receiving clerk. In the summer of 1956, he transferred to a storage area where he worked as a record clerk for a year before becoming an order analyst. He was promoted to administrative staff assistant in 1961 and assigned to computer analysis and liaison in general stores. In December 1966 he was transferred to Instrument Service Section A 4615-1 where he has worked on instrument repair and calibration with the computer organization.

Dick served with the U. S. Air Force from December 1950 to December 1954, mainly at Sandia Base. Before that he was employed by a woodworking firm in Clinton, Iowa, for three years.

He has taken several business administration courses at the University of New Mexico and the University of Albuquerque. In addition, he has taken some of the computer courses offered in Sandia's Out-of-Hours program.



LEONARD L. STRAWDERMAN to supervisor of Design Definition Section A 2211-4, effective May 1.

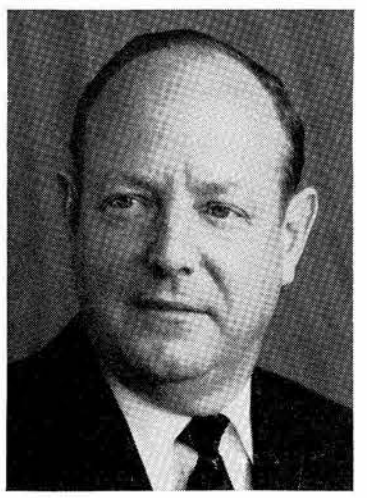
Len joined Sandia as a draftsman in August 1958 and was promoted to product design draftsman in April 1967.

From January 1956 to August 1958, he was a design draftsman in the central heating group at Coleman Company in Wichita, Kans. Before that he was a weather observer with the U. S. Air Force from October 1951 to August 1955.

Len studied business administration and engineering at Wichita University from 1949 to 1951 and then took additional engineering courses at the same school after his military service.

He is a member of the American Society for Certified Engineering Technicians.

L. P. Gise Retires As Mgr. AEC-ALO



Lawrence P. Gise, manager of the Atomic Energy Commission's Albuquerque Operations since Aug. 1, 1964, retired this week after almost 33 years of federal government service.

James L. McCraw, ALO deputy manager, is acting manager of Albuquerque Operations until the arrival of Lt. Gen. Harold C. Donnelly, USAF, about Aug. 1. Now director of the Defense Atomic Support Agency, Washington, D.C., General Donnelly is retiring from military service after 35 years.

As manager of Albuquerque Operations, Mr. Gise supervised the administration and coordination of an extensive organization of laboratories and production plants. The managers of eight AEC area offices located in seven states reported to him.

Mr. Gise joined the Department of Agriculture in Washington as a messenger in August 1935. He left that agency as chief, Administrative Service Division, Bureau of Chemistry and Engineering in 1942 to transfer to the Public Building Administration. That same year he entered the U. S. Navy and served as an officer for four years.

Following his military service, he served briefly with the Veterans Administration in Dallas and later with the Navy Department in Washington. He joined the AEC's Division of Finance in 1949, transferring the following year to the Division of Military Application. He became assistant director of the division in 1955.

In 1958, he transferred to the Advanced Research Projects Agency of the Department of Defense where he served progressively as director, Program Control and Administration; assistant director for administration, and deputy director. He transferred to Albuquerque as deputy manager of ALO in April 1961.

Mr. Gise was president of the Albuquerque-Santa Fe Federal Executives Association, an officer and director of the United Community Fund, and a member of the Albuquerque Armed Forces Advisory Committee.

Following his retirement, Mr. Gise will be associated in the operation of ranching interests in southwestern Texas, with his headquarters 12 miles from Cotulla.

Mr. McCraw has been ALO deputy manager since 1964. Before joining the AEC in Albuquerque in 1951, he was employed with the State Department in Germany.

Take Note

About 130 SEGA members journeyed to Socorro April 20 for the official season-opener tournament. Jim Leonard (9331) captured low gross honors with an 82 while Preston Herrington (5431) took the low net trophy with a 66.

Flight winners were Mr. Herrington, Randy Rozelle (2213), Leo White (1321), Ken Smith (1531), Jerry Shinkle (1322), and Dave Winner (3241) and Bill Brooks (5134) (tied for second flight honors).

Directors for the tourney were Tom Crawley (9232) and Ken Wischmann (1112).

* * *

Daril Gutscher (9213) emerged singles champion of Sandia Laboratory after the wrap-up of the recent table tennis tournament. Ernie Gurule (7336) came in second while Benny Garcia (2522) took third.

Doubles winners were Fred Cericola (7321) and L. J. Woolrich (7322). Second were Jarvis Bumgarner (2522) and David Doleshal (2522). George Ingram (5132) and Thomas Towne (5133) took third place.

* * *

Congratulations are in order for Dorothylee Patterson (2126) and Sam F. Dawson (AEC/AAO) who were married April 14 in Kempner, Tex.

* * *

J. G. Marsh, supervisor of Classification Division 3414, was elected chairman of the Weapon Contractors Classification Group at a meeting of the group in Burlington, Iowa, April 17-18.

The group is made up of classification representatives from the weapons laboratories and all AEC contractors. The meeting in Burlington was hosted by Mason and Hanger. Jim will serve as chairman for one year.



CLAIRE HAUT (2112) aided the current U.S. Savings Bond campaign at Sandia Laboratory by producing a number of original posters, among them this handsome painting of a classic car.

* * *

Bill R. Emrick (5624) is the champion liar in these parts. He took the title by telling a tall tale at the recent contest which was part of the annual Wildlife and Conservation Association banquet.

Bill's story (which won the Golden Bull trophy) concerned the adventures of his frontiersman grandfather and how this rugged pioneer changed a migratory bird into a ground dwelling snake killer. In the process, the roadrunner became a symbol of freedom and the pioneer spirit, and was finally designated as New Mexico's state bird.

Bill's yarn was loaded with wit, humorous side issues, and was almost believable. Ask him to tell it to you sometime.

Speakers

H. H. Patterson (9230), "Mexico and the Sea of Cortez," Evening Optimist Club, April 18.

C. W. Young (9327), "Terradynamics," Joint Meeting Palm Beach sections of ASME and AIAA, April 24, Palm Beach, Fla.

M. J. Landry (7226), "Lasers: How They Work," Evening Optimist Club, April 25.

G. H. Haertling (1317), "Hot Pressed Ferroelectric Ceramics—Physical Electrical, Optical Properties," University of Missouri, April 17, Rolla.

C. E. Land (5143), "Electro-optic Ceramics—New Materials for Information Storage and Display," research seminar, April 23, Yorktown Heights, N.Y.; Yale University engineering and applied science research seminar, April 25, New Haven, Conn.; and IEEE Albuquerque Section seminar, May 7, Albuquerque.

H. R. Farley (5235), "A Trigger Circuit," IEEE student paper competition, April 11, Albuquerque.

J. N. Shinkle (1322), "Rolamite—Fundamentals and Applications," Ohio State University graduate school seminar, April 16.

R. C. Maydew (9320), "One of Our H-Bombs Is Missing," Texas Delta Chapter of Tau Beta Pi, April 29, Texas A&M University.

G. H. Bradley (2151), "Reliability and Quality in Design,'" Engineering Optimization Symposium, Idaho-Montana Section of ASME, April 11, Idaho Falls, Ida.

N. A. Bourgeois (1414), "High Energy Pulse Facility," Instrument Society of America meeting, May 3, Albuquerque.

R. D. Halbgewachs (9422), "Calculation of Bessel Functions by Digital Computers," Southwestern Section, Mathematical Association of America, April 12-13, Las Cruces.

W. S. Hunter (3465), "Recovery of a Photographic Ferricyanide Bleach," Photographic Laboratory Working Group, Inter-Range Instrumentation Group, April 23, Dugway Proving Grounds, Utah.

E. P. Quigley (2565), "European Machine Tool Technology," Albuquerque Chapter, ASTME, April 18.

C. M. Percival (5133), "Thermally Generated Stress Waves in a Dispersive Elastic Rod," Spring meeting of the Society for Experimental Stress Analysis, May 7-10, Albany, N. Y.

Rosa M. Bodenhamer and A. T. Steele (9423), "A Technique for Appraising Technical Progress," joint meeting of the Operations Research Society of America and the Institute of Management Sciences, May 1-3, San Francisco.

D. W. Ballard (2564), "Manufacturing Research at Sandia Laboratory," engineering seminar at the Western Electric Kansas City Works, May 13.

V. E. Gibbs (1622), "Teach a Survey Course in Technical Writing," 15th International Technical Communications Conference, Society of Technical Writers and Publishers, May 8-11, Los Angeles.

M. B. Murfin (1541), "Dual Specifications in Vibration Testing"; and A. F. Witte (7324), "A Theoretical Modal Study for the Lateral Vibrations of Bars Having Variable Cross Section and Free End Condition," 38th Shock and Vibration Symposium, May 1-2, St. Louis.

G. W. Barr (1142), "Buckling Characteristics of Cylindrical Shells with Initial Imperfections," Buckling of Structures Symposium, Air Force Academy, May 3, Colorado Springs, Colo.

S. S. DeVault (3351), "Safety as a Profession"; J. W. McKiernan (9331), "Engineering Careers"; F. H. Dausses (3132), "Apprenticeship Training Programs"; C. A. Olson (7221), "Meteorology as a Career"; T. B. Sherwin (3430), "Public Relations as a Career"; C. S. Wolowicz (2213), "Engineering Drafting Career," civics classes, Hayes junior high, April 26, May 2 and 3.

Albert Goodman (5637), "Some Things That the Future May Bring," Heights Lions Club, April 25.

M. I. Weinreich (3421), "Foreign Languages as Professional Careers," civics class Madison junior high, May 1.

C. S. Johnson (7252), "Did They Really Understand What You Said," School of Practical Nursing, Presbyterian Hospital, May 3.

J. W. Reed (7111), "Interoceanic Canal Feasibility Studies," Sunport Optimist Club, May 8.

D. M. Fenstermacher (7224), "Astronomy," Evening Optimist Club, May 9.

R. K. Quinn (1111) and Prof. J. J. Lagowski of the University of Texas, "Spectroscopy of Quaternary Ammonium Radicals," 155th national meeting of the American Chemical Society, March 31-April 5, San Francisco.

R. K. Traeger (1111), "Polymers — Where From?" University of Arkansas College of Engineering seminar, May 14, Fayetteville.

Service Awards

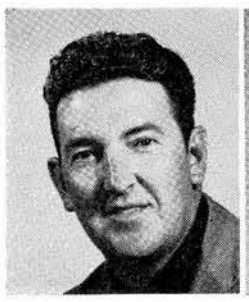
20 Years



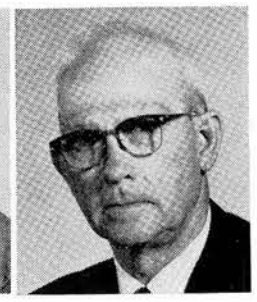
M. H. Brown
3242



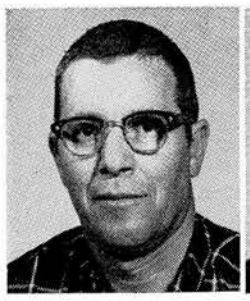
L. D. Chapman
4518



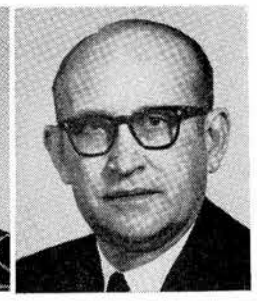
T. C. Garcia
4623



J. S. Maxon
2414



W. A. Montoya
4514



H. H. Pastorius
4540

10 Years

May 3-16

Nina M. Clark 3126, Leona B. Cooper 4131, H. D. Sorensen 8127, I. Laurene Dubuque 9322, D. P. Kerstetter 2115, Doris A. Mason 2234, E. L. Amador 4631.

W. E. Young 1524, Helen M. Spriggs 3126, Barbara Pafford 3251, C. J. MacCallum 5231, Ruth Birdseye 3126, Ellen E. Martin 9411, and R. L. Hay 4514.

Sympathy

To Floyd A. Stake (2212) for the death of his son, Kendall, in Viet Nam on April 3.

To Clyde Leyba (1315) for the death of his grandmother in Albuquerque recently.

15 Years



T. R. Blaz
2213



C. A. Blossom
2554



J. E. Haaland
1613



G. B. Lenert
4543



J. E. Marceau
1415



R. J. Sinkey
9225



T. R. Stevenson
5636



Doris M. Welch
3244



J. L. Wheeler
3251

Welcome . . . Newcomers

April 15-26

Albuquerque

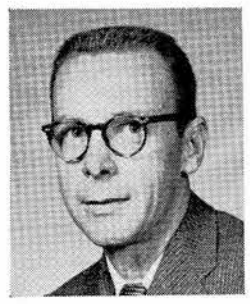
Mary Ellen Fresquez	4333
Michael E. Gadberry	4382
Donald W. Goodrich	4234
Norma V. Judkins	3121
Hilario M. Montano	4574
Robert Montoya	3415
*Peggy C. Poulsen	4212
Ray P. Reece	4234
Delfinia Sanchez	3252

Louisiana

Lyle W. McVay, Jr., New Orleans	9421

* Denotes rehired

Death



R. Max Allan, supervisor of Administrative Systems Division I 9423, died April 21 after a long illness. He was 50.

He had worked at Sandia Laboratory since June 1953.

Survivors include his widow, a daughter and a son.

Sandians to Participate in Scout 'Wood Badge' Course

A number of Sandians will be participating in a "Wood Badge" training course for scout leaders of the Boy Scouts of America May 4-12 at Camp Asaayi, N.M., which is located on the Navajo Reservation near Window Rock.

The Wood Badge training course is called the "PhD of scouting" and is one of the highest achievements scout leaders can earn. The course will be conducted by G. A. Fowler (9000), who is a Deputy Camp Chief on the World Gilwell Training Team which is headquartered in England.

Assistant Deputy Camp chiefs will be Richard E. Brian (2554), Harry A. Warrick (7322), and N. Arthur Cordova (4231).

Attending the course will be Ernest L. Bolton (4332), LeRoy W. Paulson (7226), Edward C. Reilly (3465), Fred T. Stixrud (7311) and Eugene W. Zucuski (1322). Other scout leaders from throughout the Kit Carson Council and from other councils in Texas will be attending this regional course.

The eight-day outdoor course will emphasize scouting techniques, leadership qualities for training others, and the philosophy of scouting. To earn his Wood Badge, a scout leader must also prepare a comprehensive written discussion of scouting philosophy and personal motivations for service.

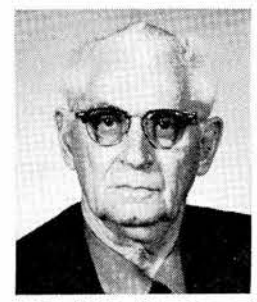
Sandia's Rolamite Featured

The April issue of MECHANICAL ENGINEERING (ME) features Sandia Laboratory's rolamite as the mechanism of the year.

Devoting 19 pages to this development, the longest article ever published by ME, the publication states that "rolamite technology may become a principal branch of mechanical engineering, taught as course material as a requisite to the ME degree. Certainly, its fundamentals must be understood by every designer and experimentalist if he is to explore all possibilities for a vast number of problems."

The American Society of Mechanical Engineers, which publishes ME, printed 90,000 copies of this issue: 50,000 for its regular subscribers and 40,000 for handouts to participants of the ASME Design Engineering Conference held in Chicago on April 22-25.

Retiring



Delmar D. Poer will retire the end of this month. He joined the Quality Assurance organization at Sandia in February 1952 as a surveillance technician. With the exception of six months at the Albuquerque Laboratory, Del's 16 years with the company have all been spent at field locations. In 1956 he was promoted to staff assistant-technical, and is currently assigned to Section 2126-2 of Stockpile Sampling Operational Division at the Pantex Plant in Amarillo.

Mr. and Mrs. Poer will make their retirement home at Mangum, Okla., Del's hometown.

Del's sense of humor is reflected in the information he sent the LAB NEWS concerning his retirement plans:

". . . My personal plans do not include too much participation in the usual sports, hobbies and avocations. True, I may fish some . . . but the fish quickly learn that I present an almost non-existent threat.

"My golf game is nothing short of organized mayhem and it requires two alleys for me to bowl. Woodworking? Ugh! The last part of that word is too repulsive. Whenever I travel, I usually get lost. And as far as visiting—I hate most of my relatives.

"I'll play some music, perhaps, on my Hammond organ and piano. (I like to play them simultaneously. That way, one instrument masks the mistakes made on the other.) I like to play bridge but have trouble getting anyone to play with me. It seems, I have a tendency to cheat. . . .

"Anyway, from past experience, I know that I'll need to conserve my strength in order to get my wife to take care of the 'woman's work' around the place. It takes an awful lot of yelling, screaming and hand-waving to get a big lawn mowed."

Events Calendar

May 3-8—University of Albuquerque Production of "Marat/Sade."

May 3-5—One-Act plays, "Home Free!" and "The Family Joke." Old Town Studio, 1208 Rio Grande NW, reservations tel. 242-4602.

May 4-5—White Rock canyon of the Rio Grande via rubber rafts. N.M. Mountain Club, leader George Steck, tel. 299-2313.

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CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday.
A maximum of 125 ads will be accepted for each issue.

RULES

1. **Limit: 20 words**
2. **One ad per issue per person**
3. **Must be submitted in writing**
4. **Use home telephone numbers**
5. **For Sandia Corporation and AEC employees only**
6. **No commercial ads, please**
7. **Include name and organization**
8. **Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.**

FOR SALE

CARS & TRUCKS

'64 CORVAIR MONZA sport coupe, 4-spd. trans., less than 26,000 miles, $825. Stone, 298-4620.

'60 FORD, original owner, $250. Parker, 299-

'49 OLDSMOBILE convertible, 6-cyl. motor, AT, $95; '60 Dodge V8 sedan, $375. Lawrence, 299-9118.

'59 PLYMOUTH Belvd. 4-dr. sedan, V8, R&H, PS, $160. Gholson, 299-2663.

'55 CHEV., std. shift, 6-cyl., $125. Dunbar, 299-2686.

'67 INTERNATIONAL Travelall, V8 engine, AT, 1100 series, 8600 miles, $2375. Ortega, 344-2182.

190SL MERCEDES BENZ sports convertible, $1295. Hickman, 298-3804.

'60 AUSTIN HEALY SPRITE, MK I, $550. Neau, 264-0101.

'61 CHEVROLET TUDOR Biscayne V8, R&H, std. trans., $395. Johnson, 255-2846 after 5:30.

'49 JEEPSTER-CLASSIC, 4-cyl., new top, can easily be restored, best offer over $175. Colp, 268-8035.

'56 OLDS, 4-dr. HT, PB, Hydramatic, new battery, $250. Dyer, 299-5329.

'59 BUICK LeSabre 4-dr. HT, R&H, AT, PS, PB, recent major tune-up, $325. Moody, 282-3466.

'51 CHEVY 6-cyl. Underwood, 299-2535 after 5:30.

'54 SUPER 88 Olds, 2-dr. HT. Broyles, 255-7253.

'57 CHEVY station wagon, 9-passenger, V8, AT, R&H, oversize wsw tires, trailer hitch, $325. Millsap, 296-5198.

'54 JEEP station wagon, R&H, OD, new paint, $200. Haskins, 282-3748.

'50 STUDEBAKER 4-dr. OD, new rebuilt transmission & motor, $100. Gallegos, 119 Conchas NE, 296-2903 or 296-4414.

'63 VOLKSWAGEN, $850; '60 Chev. ½-ton truck, 4-spd., $450. Gonzales, 299-7208.

'63 CORVAIR MONZA 4-dr., 4-spd. stick, positraction. Ouverson, 299-3484.

'65 FORD Ranchero, 26,000 miles, 6 cyl. w/ST, R&H, $1000. Elliott, 256-7909.

'58 FORD Fairlane 500, factory air, AT, $150. Gonzales, 877-5693.

'55 PLYMOUTH 2-dr. station wagon, $95. Newfield, 255-9743.

MISCELLANEOUS

EL TORO power mower & Columbia 360K Hi Fi record player. Macmillan, 296-1253.

STENOTYPE, complete w/self-teaching books & records, $75, terms. Jackson, 296-2548 after 5:30.

SELF-CONTAINED travel trailer, brakes, extras, Southwick, 282-3782.

GOLF CLUBS, Corydon, 9 irons & 3 woods, plus bag, $40. Sweet, 296-1352.

15' FIBERGLASS Hydroswift boat w/tachometer, speedometer, compass, 70hp Mercury engine, tilt trailer, $995 or best offer. Downs, 296-4710 or 299-1537.

CHAIR, modern Bertoia, chinese red, $25. Moriarty, 296-1369.

GOLF CLUBS, professional, woods: 1, 2, 3, 4 MacGregor tourney; irons: 2-9 Goldcraft; putter, PGA Ram w/bag, $95. Baker, 299-3403.

MOTORCYCLE, Suzuki Scrambler 200, less than 2500 miles, cost $625, sell for $450. Hall, 255-9740.

STEEL TRUNK w/tray, 39" long x 23½" high x 21" deep, $12.50. Stark, 299-5953.

BOY'S 14" Western Flyer bicycle w/training wheels, $7. Surface, 298-1394.

ANTIQUE wash stand, love seat, treadle sewing machine; Harmony guitar, $40; New Home auto. sewing machine, $30. Coalson, 298-8074.

'64 3-bdr., 2-bath house trailer, sacrifice equity, take over payments, small balance. Cooper, 6031 Beck Rd. SW, 877-4674.

TRAILER, 8x40, 1-bdr., near base, '57 Angelus, $1750; Pomeranian male puppies, perfect markings & characteristics. Westman, 255-6048.

TOY POODLES, silver, AKC reg., male & female, very small. Shipley, 298-2433.

MOBILE HOME, '67 Paulson Melody Lane balcony model, 60'x12', low down payment. Craven, 345-0596.

FREE STANDING METAL FIREPLACE, fully insulated, complete installation kit including pipe, insulated flu, cap & roof jack, $150. Howard, 898-2229.

BELL & HOWELL, 8mm outfit, zoom projector, zoom camera & editor-splicer, $150 or trade. Scott, 299-3412.

GE DRYER, 2-spd., $25. Bishop, 299-0649.

4-WHEEL Bradley trailer, 8'x14', $135. Davis, 636-2874 (Peralta) after 6.

TRAILER, 1-wheel utility, 54" x 54" x 26" deep, lights, $35. Hickman, 298-3804.

ELECTRIC RANGE, GE coppertone, rotisserie, $150. Guthrie, 298-8388.

SIAMESE KITTENS, sealpoint, 5 wks. old May 4, 2 male, 3 female, $10 each. Davis, 298-1957.

'59 VW TRANS AXLE, $50; Frigidaire 9 cu. ft. refrigerator/freezer, $50; '59 VW belly pan shortened for Manx, $50. Class, 298-6062.

'63 VESPA 150cc scooter, sell or trade for gocart; baby crib, stroller, etc.; floor fan. Benson, 256-1350.

DALMATIAN PUPS, 6 wks. old, full blooded, Moll. 299-1710.

LAWN MOWER, 21" rotary, 3 HP Briggs & Stratton engine, leaf-mulching attachment, $17.50. Sims, 255-6967.

MATTRESS, Englander, foam rubber, dbl bed size, 4½ yrs. old, $35. Siska, 298-5756.

BOX SPRINGS & mattress, Chavez, 256-1087.

WARD'S washer & dryer; Zenith 23" b/w stereo console, 2 speaker enclosures & record cabinet. Dugan, 296-4440.

MEMBERSHIP in Sigma Flying Club, Cessna 182 Skylane & club owned hanger at Sunport. Bickel, 268-3203.

TWO proven brood mares, one 3-yr.-old filly, permanent registered AQHA, excellent conformation & blood lines, guaranteed sound. Jolly, 877-2474.

BUNK BEDS, dresser, partially antiqued; 21" TV console; CO_2 rifle; doll stroller; slot cars; Lionel train. Butler, 299-5626.

KALAMAZOO electric guitar w/2 pickups & vibrato & case; Epiphone amplifier, $130 total. Hunnicutt, 299-2932.

ACRILON plush-pile carpet, 14'x17', royal blue, 1½ yrs. old; 2 overstuffed chairs; auto AC parts (compressor, evaporator); dbl. bed, walnut headboard. Chandler, 296-3323.

TOY FOX TERRIER, black & white, male, 8 wks. old. Miller, 299-6067.

AKC reg. silver poodles, 7 wks. old. Wangerin, 298-6351.

SCOTT 348 stereomaster FM tuner & amplifier; Ampex 961 tape recorder; Ampex 915 bookshelf speakers. Johnson, 265-5043 after 6.

DINETTE SET: table & 6 chairs, wrought iron, $25. Dauphinee, 255-6367.

24" & 60" hard-top desk; working refrigerator, make offer. Kindschi, 256-0531.

8' POOL TABLE, Penney's foremost, 6 mos. old, will deliver. Kromer, 282-3804.

16' SELF-CONTAINED trailer, sleeps 5, $1750. Browne, 344-9675.

AURORA HO car set, $6; Sear's evaporative cooler for car window, new, $6. Driver, 299-2063.

REAL ESTATE

GLENWOOD HILLS lot, 90'x175', view of Sandia Mountains & city, paved & all utilities to lot. Duimstra, 299-9278.

5-ROOM modern log cabin, fully furnished, fireplace, porches, near stream, located 10 miles north Jemez Springs on Rt. 126. Clyde, 255-6805.

2-BDR. HOFFMAN BRICK, spacious backyard, fruit trees. Mitchell, 299-3487 after 6.

5 ACRES mountain tract, excellent access, close in electricity. Crosby, 898-0705.

4-BDR., 3 bath, den, utility, built-in kitchen, sprinklers, walls, carpet, drapes, terms, near Shakey's & Joe Beal's, by appointment. Jennings, 299-5965.

3-BDR., FR, 2 baths, built-in kitchen, drapes, carpeting, walled, near schools, 716 Tomasita NE. Davis, 298-8559.

3-BDR., 1¾ baths, fp, carpet, drapes, covered patio, extras, one owner, $450 down, 9816 Indian School Rd. NE. DeWerff, 298-1029.

MOSSMAN 3-bdr., 1¾ bath, hw/floors, carpeted, drapes, utility area, AC, walled yard, Comanche & Louisiana, assume mortgage for 5¾% loan. Johnson, 298-0296.

INVEST now and have property clear in 9 yrs., brick, triplex, excellent rental, income $275, payments $180, $5000 down. Johnson, 296-1324.

3-BDR. JENKINS in Coronado Crest, lg. FR & playroom, carpet, drapes, cooler, stove, $15,900, 5¼%. Stone, 298-4879.

ASHCRAFT buff brick, 4-bdr., 2½ baths, den, carpeted, covered patio, 2450 sq. ft., 5½% loan, $36,000. Eberhart, 268-6943.

3-BDR., 1½ baths, on lg. corner lot, convenient NE location, low equity on 5¼% GI. Bland, 268-4913.

3-BDR., landscaped front & rear, w/sprinkler system, carpet, den w/fp, 2 baths, AC, $17,900. Cronin, 298-8871.

CORRALES, sale or lease: 3-bdr., den, w/studio apt; 3 adobe-walled paved patios, stables, acre, availability negotiable. Swiss, 898-2083.

BRICK, 3-bdr., 1¾ bath, NE heights, ¼ acre fully landscaped, sprinklers, many fruit trees, covered patio, $17,900. Seligman, 298-1993.

GLENWOOD HILLS LOT, 160x120, small down, take over payments. Levesque, 299-1213.

LARGE MT. HOME off North 10, will sell or trade. Souther, 282-3841.

ROBERSON, 2865 sq. ft. including basement & garage, $21,500. Hurley, 298-5250.

JEMEZ MT. CABIN, Horseshoe Springs summer home, 2 rooms furnished, water, sewer, electric, fireplace, near fishing stream, $3500. Schellenbaum, 299-1005.

WANTED

SMALL cement mixer, with or without power or mortar mixing pan. Gluvna, 299-8027.

TWO 10-speed racer bicycles & 1 full size ping pong table, good condition preferred. Sweig, 296-1835.

HOUSING WANTED for summer staff: June - Sept. listings now being taken by Mrs. Robinson, 264-2757.

TRADE paid up city lot on paved street for house or apartment equity. Chavez, 298-5091.

WILL TRADE use of my houseboat for your ski cabin or camper. Westman, 255-6048.

WANT TO RENT 3-bdr. furnished house or apt. by consulting Professor & family for months of June, July & Aug. Alzheimer, 299-2904.

WARDROBE TRUNK, large size w/drawer and hangers. Russell, 298-0840.

SIX TO TEN HP outboard motor. York, 255-3097.

4 TRAILER leveling jacks. Johnson, 255-5427.

HAND LAWN mower, easy to push. Laskar, 299-1024.

LARGE camper pickup or Volkswagen camper to rent from May 23 thru June 2; also want leatherette or naugahyde furniture. Chandler, 296-3323.

SOLID STATE HI FI equipment. Swain, 265-0098.

.45 CAL. automatic pistol or M1 carbine. Zaluga, 344-1564, 1321 Van Cleave NW.

FOR RENT

HOUSE for lease NE heights, 3-bdr., carpet, fp, covered patio, convenient to elementary school and Sandia. Dawirs, 282-3630.

2-BDR. unfurnished apt., fully carpeted, drapes, 1¾ bath, private patio, dishwasher, intercom, $130/mo., 1309 Virginia NE, Apt. A. Cotter, 299-2296.

TRAVEL TRAILER, 15', sleeps 5, butane stove & lights, some time still left this summer, reserve now. Colp, 268-8035.

100 ACRES fenced w/2-bdr. house, electric well, Hwy. 10 south. Puccini, 255-0568.

3-BDR., 1¾ baths, carpet, drapes, AC, excellent neighborhood, close to Sandia, $135/monthly, immediate occupancy. Patterson, 243-6219.

2-BDR. unfurnished apt., utilities paid, vicinity Los Altos-Grant schools, 10 mins. ride to Sandia, lg. kitchen, ample closets & cupboards. Bernyk, 299-9171.

TENT TRAILER, new, sleeps 4-6, has 7'x11' add-a-room. Harris, 299-6664.

TEARDROP TRAVEL TRAILER, sleeps six, $35/week. Bentz, 299-3448.

LOST AND FOUND

LOST—Gold earring w/rhinestones in center, silver hoop earring, transistor radio w/brown case, 15-yr. bracelet, sunburst Sarah Coventry pin, officer's card, silver & green Parker ballpoint pen, Rx glasses in black case, black round earring, orange scarf, bank letter. LOST & FOUND, tel. 264-2757, Bldg. 610.

FOUND—Red dangling earrings, 15-yr. tie clasp. LOST & FOUND, tel. 264-2757, Bldg. 610.



SANADO CLUB OFFICERS to be installed during the May 11 formal "Pink Champagne and Red Roses" ball include, from left, Mrs. S. D. Brooks, president; Mrs. S. T. Landrith, first vice president; and Mrs. C. R. Pritchett, outgoing president who will be a member of the Sanado Board. The ball starts at 6 p.m. with a social hour, steak dinner and dancing.

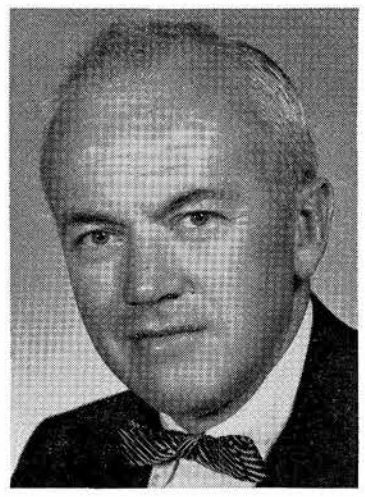
Colo. U. Honors E. H. Draper As 'Distinguished Alumnus'

The University of Colorado College of Engineering tonight will honor the late Eaton H. Draper as one of several "distinguished alumni."

Mr. Draper made a significant contribution to the nation's nuclear weapons program during his 17 years at Sandia. For five of these years he was a vice president. He died unexpectedly on June 24, 1966.

The Distinguished Engineering Awards program was set up three years ago by the University of Colorado Engineering Development Board. The selections are made from among 350 names. This list of alumni is reviewed yearly to select the most highly qualified persons.

Awards to living recipients are given to outstanding engineers in five general areas: education, research and invention, government services, industry and commerce, and private practice. In addition, a special award may be given to an alumnus making contributions in a special field: Astronaut M. Scott Carpenter was one of these persons so honored. There is no limit on the number of posthumous awards that may be made each year. In 1968, there will be a total of nine awards, three of them posthumously.



E. H. Draper

Mr. Draper was graduated from the University of Colorado in 1940 with a BS degree in mechanical engineering. His graduate work was at Stevens Institute of Technology.

Mrs. Draper will attend the awards banquet tonight at Harvest House Hotel in Boulder, Colo. She will be accompanied by Mr. Draper's sister and brother-in-law, Mr. and Mrs. John Zuck of Arvada, Colo.

One Week Remains in Lab Clean-Up Drive; Rid Areas of Excess Items

One week remains in Sandia Laboratory's clean-up campaign. Announced last week by C. W. Campbell, vice president 4000, object of the drive is to dispose of unneeded material and equipment while generally "policing" the area.

Clean, uncluttered offices and work areas reduce the chances for accidents, fires and security infractions, and will improve operating efficiency.

All organizations have been instructed to participate in the clean-up campaign.

Disposal of unneeded material and equipment should follow these procedures:

Place all unneeded non-accountable material with no salvage value and unclassified wastepaper in wastepaper baskets, dumpsters or trash boxes.

Send all non-accountable items with salvage value to Redistribution and Marketing Division 4622 (tel. 264-2342).

Accountable and classified material should be sent to Division 4622 in accordance with SCI 6690.

Reusable instruments, meters and similar equipment should be transferred to Instrument Services Division 4615 (tel. 264-8201).

Furniture should be returned to Division 4516-1 (tel. 264-3854).

For trash boxes, delivery and pickup, or for fork lift service call Telecon Desk (tel. 264-4571).

The clean-up campaign is being coordinated by Field and Plant Operations Engineering Division 4544. V. L. Duke is chairman.

The clean-up campaign and the measurement of records and reference material holdings requested by Records Management Division 3428 is being conducted simultaneously. There is no necessary connection between the two efforts. However, if reference materials or records are to be discarded or sent to the Technial Library, the Central Technical File or to the Records Depository, the action should be taken prior to the measurement of holdings.



SPRING CLEAN-UP now underway at Sandia Laboratory has brought this material into Sandia's Redistribution and Marketing Division 4622, but space is still available for your unneeded equipment. Call 264-2342 if you have questions about material disposition. In front are (l to r) John Samuelson, Tircio Ortega and Louis Yannoni. In background are Flaviano Saavedra, left, and Alfonso Trujillo.

Coronado Club Activities

'Champagne and Roses' Ball Set May 11

The Sanado Woman's Club annual spring formal ball Saturday, May 11, is the highlight of the Coronado Club's calendar for the next couple of weeks. This year the ball has a "pink champagne and red roses" theme and the Club will be decorated accordingly.

The program will feature installation of the following new officers: Mrs. S. D. Brooks, president; Mrs. S. T. Landrith, first vice president; Mrs. R. J. Dye, second vice president; Mrs. M. M. Newsom, third vice president; Mrs. A. H. Koontz, fourth vice president; Mrs. V. K. Smith, fifth vice president; Mrs. H. F. Gustafson, secretary; and Mrs. J. D. Rex, treasurer.

Social hour begins at 6 p.m., steak dinner will be served at 7, installation of officers will be at 8:30, and dancing to Phil Graham's orchestra starts at 9. Tickets ($7.50 per couple) should be picked up at the Club office before May 10. The ball is open to all Coronado Club members.

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Teenage Go-Go

Tomorrow night, the Circuits will be plugged into the bandstand for the usual jolting go-go beat. The bash is scheduled from 7:30 until 10:30 p.m. Member parents should pick up tickets (members 25 cents, guests 50 cents) by 5 p.m. today.

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Social Hours

Tonight, the Aristocrats will make the happy music while the Club's famous seafood buffet is spread. The buffet costs $1.25 for adults, $1 for kids. Pat Reich and piano will entertain in the main lounge.

Social hours are scheduled from 5 to 9 p.m. every Friday with refreshments during the last hour at regular prices. Dancing is scheduled from 6 to 9 p.m. while entertainment in the main lounge continues until 12 p.m. The buffet is served from 6 to 8 p.m.

On Friday, May 10, the chuckwagon roast beef is the buffet special at $1.75 for adults and $1.50 for children. Rex Elder will be on the bandstand.

Tommy Kelly's combo will play for dancing on Friday, May 17, while the southern fried chicken buffet is served.

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Bridge

Duplicate bridge meets Mondays at 7 p.m. Ladies bridge will meet Thursday, May 16, at 1:15 p.m.

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Luncheon Fashion Show

Travel fashions will be modeled during the lunch hour Thursday, May 16. The show is being arranged by Mrs. James Ayers through Lillyan's Fashions. Models will include Pat Goetsch (3123).

Sandia Safety Signals

Under-Inflated

Did you know that the amount of air in your tire has a bearing on your gas mileage? Test drivers have proven many times that under-inflated tires can cut more than a mile per gallon off your gas mileage.

Proper Storage

Don't keep household cleaners and detergents under the kitchen sink unless the cabinet is locked when youngsters are around. In one study, 37 percent of poisoning cases involved crawling youngsters, so arrange storage areas out of their reach.

Rings Can Endanger Fingers

A ring can be caught on a projection, a door latch, etc., with disastrous consequences. To make rings safe, some experts recommend that jewelers cut slots with a fine metal saw inside the circle. Then if the ring is snapped, it will spread open like a notebook ring, sparing the finger.

Hale Farley Wins Student Paper Prize

Hale Farley (5235), a staff assistant attending the University of New Mexico under the Educational Aids Program, won the contest for the best student paper conducted recently by the Albuquerque Section of the Institute of Electrical and Electronics Engineers. Title of his paper was "A Trigger Circuit," which described a circuit for a plasma machine used in Atomic Particle Physics Division 5235.

The award consisted of a $50 prize and the opportunity to compete in the regional contest. The Albuquerque IEEE Section sponsors the contest annually.